



Attorney Docket No.: 3800024.00560 / 4207

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Lawrence G. Hamann *et al.* Art Unit : 1624
Patent No. : 7,632,858 Examiner : Balasubramanian, Venkataraman
Issue Date : December 15, 2009 Conf. No. : 9300
Serial No. : 10/712,456 Cust. No. : 77202
Filed : November 13, 2003
Title : OPEN CHAIN PROLYL UREA-RELATED MODULATORS OF ANDROGEN
RECEPTOR FUNCTION

Attn: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CERTIFICATE OF CORRECTION

Dear Sir:

Pursuant to 37 C.F.R. 1.322 and 1.323, the patentee respectfully requests that a Certificate of Correction be issued for the above referenced patent to correct the following errors:

IN THE TITLE PAGES:

In Item (56) References Cited, please remove from the list of OTHER PUBLICATIONS the following duplicate references beginning on page 3, first column, line 35, through page 3, second column, line 11:

- Beyler et al., J. Am. Med. W. Assoc., 23(8):708-721 1968.—;
- Boeijen et al., Bioorg. Med. Chem. Lett. 8:2375-2380 1998.—;
- Boris et al., Steroids, 15:61-71 1970.—;
- Bundgaard, "Design of Prodrugs", Elsevier Science Publishers 1985, tabe of contents.—;
- Bundgaard, "Design and Application of Prodrugs", Harwood Academic Publishers 1991, pp. 113-191.—;
- Chalepakis et al., Cell, 53:371-382 1988.—;

CERTIFICATE OF MAILING BY "EXPRESS MAIL"

"Express Mail" Mailing Label Number: EM 315450707US

Date of Deposit: January 28, 2010

I hereby certify that this paper is being deposited with the United States Postal "Express Mail Post Office to Addressee" Service under 37 CFR §1.10 on the date indicated above and is addressed to: Attn: Certificate of Correction Branch, Commissioner for Patents, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450.

Stefanie Dost

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Patent No. : 7,632,858
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- Delaisi et al., J. Steroid Biochem. Molec. Biol. 41(3-8):773-7 1992.—;
- Dyatkin Tet Lett 38(12):2065-6 1997.—;
- Edwards et al., Bioorg. Med. Chem. Lett 9: 1003-8 1999.—;
- Gori et al., Boll.-Soc. Ital. Boil. Sper. 42:1596-1599 1996.—;
- Gori et al., Boll.-Soc. Ital. Boil. Sper. 42:1600-1601 1996.—;
- Hamann et al., J. Med. Chem. 42(2):210-212 1998.—;
- Heiser, in Methods in Mol. Biol. 130:117-134 2000.—;
- Hempstock et al., J. Med. Food 2(3-4):243-246 1999.—;
- Hershberger et al., P.S.E.B.M. 83:175-180 1953.—;
- Hiroaka et al., Cancer Res., 47:6560-6564 1987.—;
- Imakura et al., Chem. Pharm. Bull. 40(7): 1691-1696 1992.—;
- Iseki, K. et al., Tet. 53(10) 3513-26 1997.—;
- Issartel et al., 1996, CAS 125:316198.—;
- Johannsson et al., J. Clin. Endocr. Met. 82(3):727-734 1997.—;
- Kakigami et al., Chem. Pharm. Bull. 46(1):42-52 1998.—;
- Lalezari et al., J Het Chem 20(2) 483-485 (1983).—;
- Matsuki et al., Chem. Pharm. Bull. 42(1):9-18 1994.—;
- Milata et al., Org. Prep. Proc. Int'l, 25(6):703-704 1993.—;
- Minesita et al., Cancer Research 25:1168-1175 1965.—;
- Navone et al., Clin. Canc. Res. 3:2493-2500 1997.—;
- Okuda et al., J. Urology 145:188-191 1991.—;
- Palovich et al., 2000, CAS 134:25357.—;
- Panouse et al., Ann. Pharm. Franc., 2000:291-302.—;
- Rodbard in Ligand Assay, Masson Publishing USA Inc., 1981, pp. 45-101.—;
- Schuur et al., J. Biol. Chem. 271(12):7043-7051 1996.—;
- Suzuki et al., J. Steroid Chem. Mol. Biol. 37(4):559-567 1990.—;
- Talon et al., Br. J. Pharmacol., 134(7): 1523-31 2001.—;
- Montes de Oca et al., Arkivoc, 390-403 (2003).—;
- Uozumi, Tet Lett 42:407-410 2001.—;
- Uozumi et al., Tet Lett 42:411-414 2001.—;

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— Venable, *Am. J. Anat.* 119:263-270 1966.—; and

— Wermuth *et al.* In the Practice of Medicinal Chemistry, Academic Press, 1996, pp. 671-696.—.

In Item (56) References Cited, please remove from the list of OTHER PUBLICATIONS the following duplicate references beginning on page 3, second column, line 53, through page 3, second column, line 62:

— U.S. Appl. No. 11/048,439, Filed Feb. 1, 2005, Publ. No. 2005-0187267.—;

— U.S. Appl. No. 11/070,808, Filed Mar. 2, 2005, Publ. No. 2005-0197359.—;

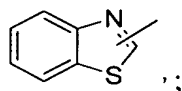
— U.S. Appl. No. 11/931,282, Filed Oct. 31, 2007, Publ. No. 2008-0108649.—;

— U.S. Appl. No. 11/931,395, Filed Oct. 31, 2007, Publ. No. 2008-0103188.—; and

— U.S. Appl. No. 11/931,498, Filed Oct. 31, 2007, Publ. No. 2008-0108691.—;

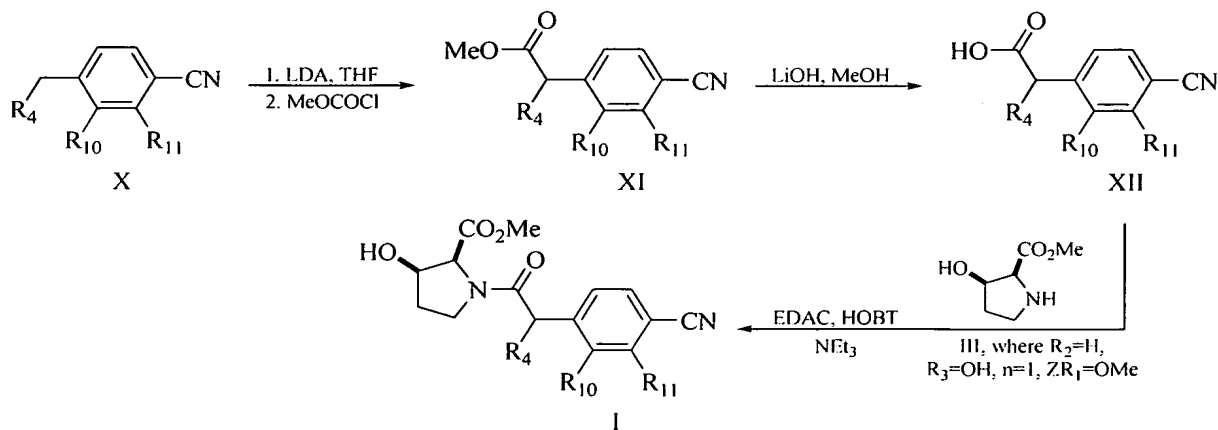
IN THE SPECIFICATION:

In column 8, beginning at line 25, please replace the structure of the eighth heteroaryl group listed with:



in column 13, line 10, please replace “V” with –VI–;

in columns 13-14, beginning at line 41, please replace the designator “XI” with –XII– for the third chemical structure in Scheme V as shown below:



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in column 20, lines 29-30, please replace "Tibolone, prostanoids" with –Tibolone, prostanoids–;

in column 20, line 44, please replace "farnesyl" with –farnesyl–;

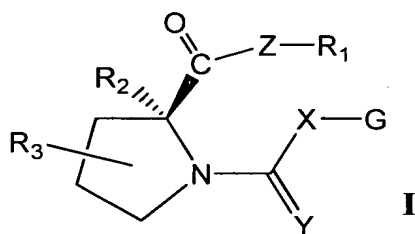
in column 32, line 2, please replace "(85%),. column" with –(85%), column–;

in column 36, line 14, please replace "mmol);,in" with –mmol) in–;

IN THE CLAIMS:

Please replace Claims 1 and 12 with the following Claims:

1. A compound of formula I



or a pharmaceutically acceptable salt thereof,

wherein:

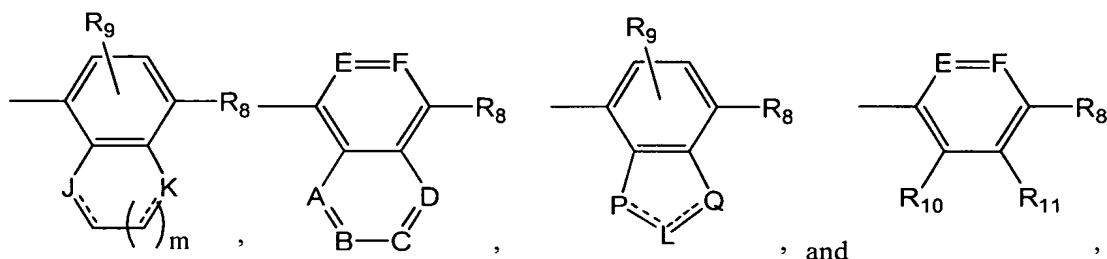
- R₁ is selected from the group consisting of alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH₂OR₄;
- R₂ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocycle or substituted heterocycle, heteroaryl or substituted heteroaryl and CH₂OR₄;
- R₃ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CH₂OR₄, OR₂, SR₂, halo, NHR₂, NHCOR₄, and NHCONR₄R₄';
- R₄ and R₄' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocycle or substituted heterocycle and

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heteroaryl or substituted heteroaryl;

G is selected from among:



wherein:

R₈ is CN;

R₉, R₁₀, and R₁₁ are each independently selected from the group consisting of hydrogen (H), NO₂, CN, CF₃, OR₄, CO₂R₄, NR₄R₄', CONR₄R₄', CH₂OR₄, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;

A to F each independently is selected from among N and CR₁;

J, K, L, P, and Q each independently is selected from among NR₁₂, O, S, SO, SO₂ or CR₁₂R₁₂';

R₁₂ and R₁₂' in each functional group are each independently selected from a bond or R₁;

m is an integer of 0 or 1 ;

X is a linking group selected from the group consisting of NR₄ and CHR₄;

Y is selected from the group consisting of O, NR₄, NOR₄, S and CH₂; and

Z is -O-[[,]] or NR₄;

with the following provisos:

(a) when Y is NOR₄, R₄ is not hydrogen;

(b) when R₁ is methyl,

X is NH, and

Y is O or S, then

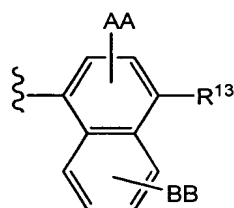
Z is not O;

(c) when (i) R₁ is methyl,

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- (ii) X is NH,
- (iii) Y is NR₄,
- (iv) R₄ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl, and
- (v) G has the following structure:



wherein:

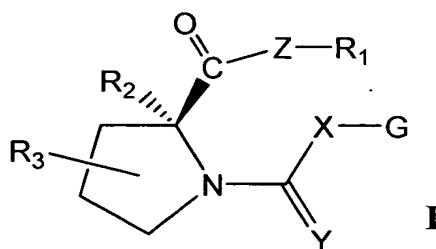
- R₁₃ is selected from the group consisting of hydrogen, cyano (-CN), nitro (-NO₂), halo, heterocyclo, OR₁₄, CO₂R₁₅, CONHR₁₅, COR₁₅, S(O)_pR₁₅, [[SO₂NR₁₅NR₁₅']], SO₂NR₁₅R₁₅', NHCOR₁₅ and NHSO₂R₁₅;
- R₁₄ in each functional group is independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF₂, CF₃ and COR₁₅;
- R₁₅ and R₁₅' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl and -CN;
- AA and BB each independently is selected from the group consisting of hydrogen, halo, cyano (-CN), nitro (-NO₂), alkyl or substituted alkyl and OR₁₄; and

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p is an integer from 0 to 2,
then Z is not O.

12. A compound of formula I



or a pharmaceutically acceptable salt thereof,

wherein:

R_1 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH_2OR_4 ;

R_2 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo, heteroaryl or substituted heteroaryl and CH_2OR_4 ;

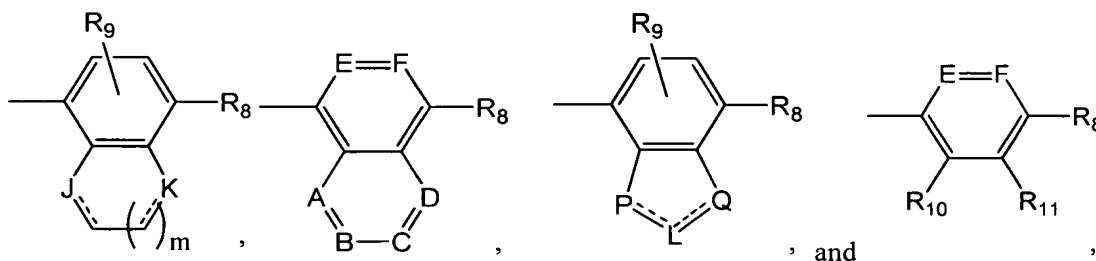
R_3 is selected from the group consisting of alkyl or substituted alkyl, and $[[\text{CH}_2\text{R}_4]] \text{CH}_2\text{OR}_4$;

R_4 and R_4' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo and heteroaryl or substituted heteroaryl;

G is selected from the group consisting of:

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wherein:

R₈ is CN;

R₉, R₁₀, and R₁₁ are each independently selected from the group consisting of hydrogen (H), NO₂, CN, CF₃, OR₄, CO₂R₄, NR₄R₄', CONR₄R₄', CH₂OR₄, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;

A to F each independently is selected from among N and CR₁;

J, K, L, P, and Q each independently is selected from among NR₁₂, O, S, SO, SO₂ or CR₁₂R₁₂';

R₁₂ and R₁₂' in each functional group are each independently selected from a bond or R₁;

m is an integer of 0 or 1 ;

X is a linking group selected from the group consisting of NR₄ and CHR₄;

Y is selected from the group consisting of O, NR₄, NOR₄, S and CH₂; and

Z is -O-[,.] or NR₄;

with the following provisos:

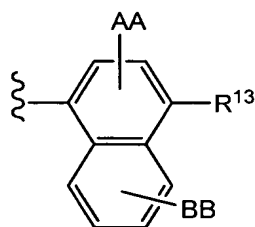
- (a) when Y is NOR₄, R₄ is not hydrogen;
- (b) when R₁ is methyl, X is NH, and Y is O or S, then Z is not O;
- (c) when
 - (i) R₁ is methyl,
 - (ii) X is NH,
 - (iii) Y is NR₄,
 - (iv) R₄ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl,

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arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl
 or substituted heteroaryl, and

(v) G has the following structure:



wherein:

R_{13} is selected from the group consisting of hydrogen, cyano (-CN), nitro (-NO₂), halo, heterocyclo, OR₁₄, CO₂R₁₅, CONHR₁₅, COR₁₅, S(O)_pR₁₅, [[SO₂NR₁₅NR₁₅']]
SO₂NR₁₅R₁₅', NHCOR₁₅ and NHSO₂R₁₅;

R_{14} in each functional group independently is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF₂, CF₃ and COR₁₅;

R_{15} and R_{15}' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl and CN;

AA and BB each independently is selected from the group consisting of hydrogen, halo, cyano (-CN), nitro (-NO₂), alkyl or substituted alkyl and OR₁₄; and

p is an integer from 0 to 2,

then Z is not O.

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REMARKS

A Certificate of Correction incorporating the above changes is included with this Request. Since the errors are those of the Patent Office, no fee should be due. If it is determined that a fee is due, the Office is hereby authorized to charge the fee to Deposit Account No. 02-1818.

This Certificate of Correction seeks to remove duplicate publications listed in the "OTHER PUBLICATIONS" section of References Cited, Item (56). Publications "Beyler et al." through "Wermuth et al." (page 3, column 1, line 35, through page 3, column 2, line 11) are previously listed (page 2, column 2, line 66, through page 3, column 1, line 34). The U.S. Publication Nos. are previously listed in the "U.S. PATENT DOCUMENTS" section beginning on page 2, column 1, line 8.

This Certificate of Correction seeks to correct numerical, formatting, spelling and chemical structure errors in the Specification introduced by the PTO. The error in the heteroaryl group structure in column 8, beginning at line 25, is corrected by replacing an "N" with an "S" in the structure of the eighth heteroaryl group listed. The error in column 13, line 10, is corrected by replacing "V" with "VI." The error in Scheme 5 at columns 13 and 14, beginning at line 41, is corrected by replacing "XI" with "XII" for the third chemical structure in the scheme. The errors in column 20, lines 29-30 are corrected by deleting the extra spaces in the words "Tibolone, prostanoids" so that it now reads "Tibolone, prostanoids." The spelling error in column 20, line 44, is corrected by replacing "famesyl" with "farnesyl." The punctuation error in column 32, line 2, is corrected by deleting the period "." in "(85%),. column" so that it now reads "(85%), column." The punctuation error in column 36, line 14, is corrected by deleting the colon and comma ":", in "mmol);,in" so that it now reads "mmol) in."

This Certificate of Correction seeks to correct omissions, punctuation and spelling errors in the Claims. The error in Claim 1 at column 37, line 21 (which was previously amended in the Amendment mailed on April 9, 2009, a copy of which is attached herewith as evidence), is corrected by adding a colon ":" after "wherein."

The punctuation error introduced by the PTO in Claim 1 at column 37, line 41, is corrected by deleting the comma "," after "-O-."

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The error in Claim 1 at column 38, line 5 (which was previously amended in the Amendment mailed on October 7, 2009, a copy of which is attached herewith as evidence), is corrected by replacing "SO₂NR₁₅NR₁₅" with "SO₂NR₁₅R₁₅'."

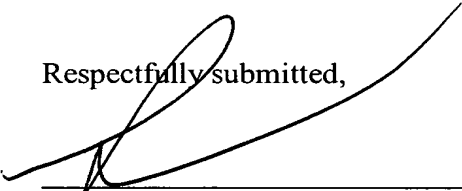
The error in Claim 12 at column 39, line 48, is corrected by replacing "CH₂R₄" with "CH₂OR₄." Issued Claim 12 is original Claim 15, added in the Amendment submitted on April 18, 2008, a copy of which is attached herewith as evidence.

The punctuation error introduced by the PTO in Claim 12 at column 40, line 33, is corrected by deleting the comma " ," after "-O-."

The error in Claim 12 at column 40, line 64 (which was previously amended in the Amendment mailed on October 7, 2009, a copy of which is attached herewith as evidence), is corrected by replacing "SO₂NR₁₅NR₁₅" with "SO₂NR₁₅R₁₅'."

This Certificate of Correction seeks to amend these errors in the Title Pages, Specification and Claims introduced by the Patent and Trademark Office. These changes do not constitute new matter. Patentee respectfully requests correction of these errors by issuance of a Certificate of Correction.

Respectfully submitted,



Stephanie Seidman
Reg. No. 33,779

Attorney Docket No. 3800024.00560 / 4207
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email: stephanie.seidman@klgates.com

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NEW CERTIFICATE OF CORRECTION

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UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

Page 1 of 12

PATENT NO. : 7,632,858 B2
 APPLICATION NO : 10/712,456
 DATED : DECEMBER 15, 2009
 INVENTOR(S) : LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE TITLE PAGES:

In Item (56) References Cited, please remove from the list of OTHER PUBLICATIONS the following duplicate references beginning on page 3, first column, line 35, through page 3, second column, line 11:

- Beyler et al., J. Am. Med. W. Assoc., 23(8):708-721 1968.—;
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- Hershberger et al., P.S.E.B.M. 83:175-180 1953.—;
- Hiroaka et al., Cancer Res., 47:6560-6564 1987.—;

MAILING ADDRESS OF SENDER:

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- Milata et al., Org. Prep. Proc. Int'l, 25(6):703-704 1993.—;
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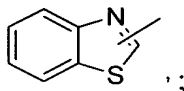
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— U.S. Appl. No. 11/048,439, Filed Feb. 1, 2005, Publ. No. 2005-0187267.—;
— U.S. Appl. No. 11/070,808, Filed Mar. 2, 2005, Publ. No. 2005-0197359.—;
— U.S. Appl. No. 11/931,282, Filed Oct. 31, 2007, Publ. No. 2008-0108649.—;
— U.S. Appl. No. 11/931,395, Filed Oct. 31, 2007, Publ. No. 2008-0103188.—; and
— U.S. Appl. No. 11/931,498, Filed Oct. 31, 2007, Publ. No. 2008-0108691.—;

IN THE SPECIFICATION:

In column 8, beginning at line 25, please replace the structure of the eighth heteroaryl group listed with:



in column 13, line 10, please replace “V” with –VI–;

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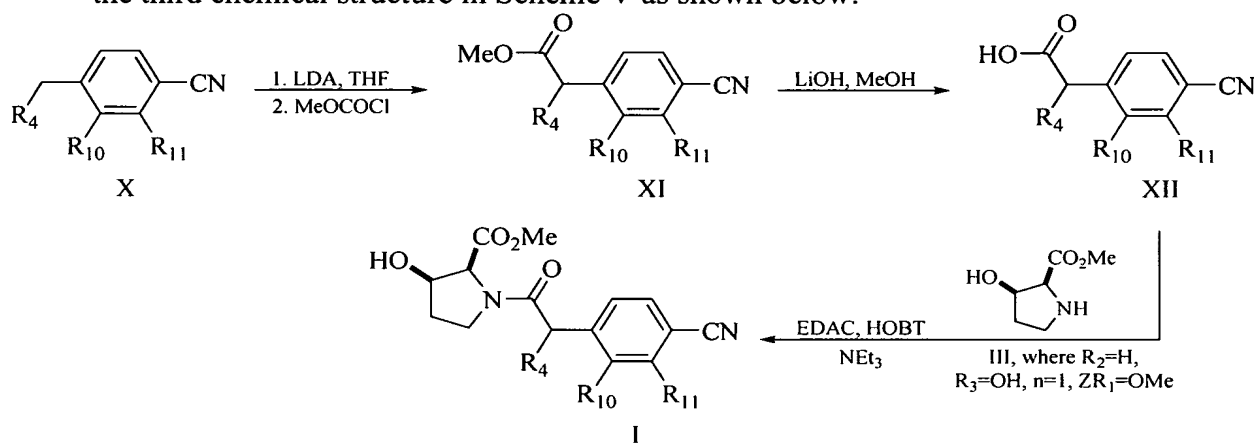
UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page 4 of 12

PATENT NO. : 7,632,858 B2
 APPLICATION NO : 10/712,456
 DATED : DECEMBER 15, 2009
 INVENTOR(S) : LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

in columns 13-14, beginning at line 41, please replace the designator "XI" with -XII- for the third chemical structure in Scheme V as shown below:



in column 20, lines 29-30, please replace "Tibo lone, pro stanoids" with -Tibolone, prostanoids-;

in column 20, line 44, please replace "famesyl" with -farnesyl-;

in column 32, line 2, please replace "(85%),. column" with -(85%), column-;

in column 36, line 14, please replace "mmol);,in" with -mmol) in-;

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Page 5 of 12

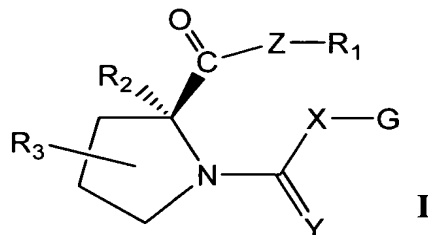
PATENT No. .: 7,632,858 B2
 APPLICATION NO .: 10/712,456
 DATED .: DECEMBER 15, 2009
 INVENTOR(S) .: LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

IN THE CLAIMS:

Please replace Claims 1 and 12 with the following Claims:

1. A compound of formula I



or a pharmaceutically acceptable salt thereof,
 wherein:

R_1 is selected from the group consisting of alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH_2OR_4 ;

R_2 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocycle or substituted heterocycle, heteroaryl or substituted heteroaryl and CH_2OR_4 ;

R_3 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CH_2OR_4 , OR_2 , SR_2 , halo, NHR_2 , NHCOR_4 , and $\text{NHCONR}_4\text{R}_4'$;

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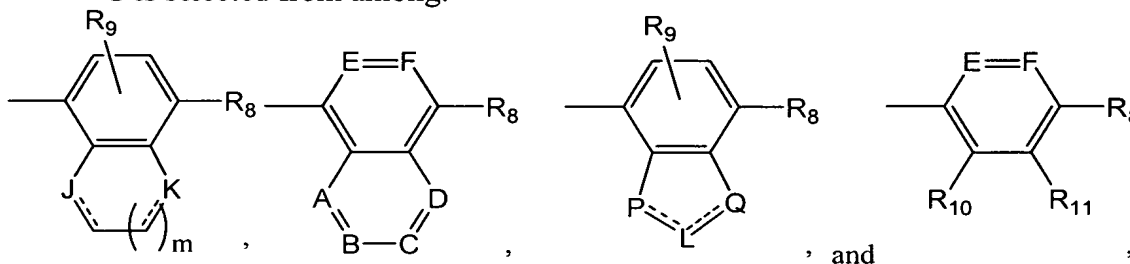
Page 6 of 12

PATENT NO. : 7,632,858 B2
 APPLICATION NO : 10/712,456
 DATED : DECEMBER 15, 2009
 INVENTOR(S) : LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

R_4 and R_4' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo and heteroaryl or substituted heteroaryl;

G is selected from among:



wherein:

R_8 is CN;

R_9 , R_{10} , and R_{11} are each independently selected from the group consisting of hydrogen (H), NO_2 , CN, CF_3 , OR_4 , CO_2R_4 , $\text{NR}_4\text{R}_4'$, $\text{CONR}_4\text{R}_4'$, CH_2OR_4 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;

A to F each independently is selected from among N and CR_i ;

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CERTIFICATE OF CORRECTION

Page 7 of 12

PATENT NO. .: 7,632,858 B2
 APPLICATION NO .: 10/712,456
 DATED .: DECEMBER 15, 2009
 INVENTOR(S) .: LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

J, K, L, P, and Q each independently is selected from among NR_{12} , O, S, SO, SO_2 or $\text{CR}_{12}\text{R}_{12}'$;

R_{12} and R_{12}' in each functional group are each independently selected from a bond or R_1 ;

m is an integer of 0 or 1 ;

X is a linking group selected from the group consisting of NR_4 and CHR_4 ;

Y is selected from the group consisting of O, NR_4 , NOR_4 , S and CH_2 ; and

Z is $-\text{O}-$ or NR_4 ;

with the following provisos:

(a) when Y is NOR_4 , R_4 is not hydrogen;

(b) when R_1 is methyl,

X is NH, and

Y is O or S, then

Z is not O;

(c) when (i) R_1 is methyl,

(ii) X is NH,

(iii) Y is NR_4 ,

(iv) R_4 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or

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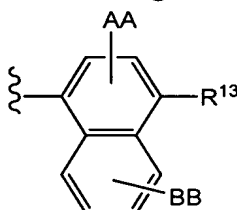
CERTIFICATE OF CORRECTION

Page 8 of 12

PATENT NO. .: 7,632,858 B2
 APPLICATION NO .: 10/712,456
 DATED .: DECEMBER 15, 2009
 INVENTOR(S) .: LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

substituted aryl, and heteroaryl or substituted heteroaryl, and
 (v) G has the following structure:



wherein:

R_{13} is selected from the group consisting of hydrogen, cyano (-CN), nitro (-NO₂), halo, heterocyclo, OR₁₄, CO₂R₁₅, CONHR₁₅, COR₁₅, S(O)_pR₁₅, SO₂NR₁₅R_{15'}, NHCOR₁₅ and NHSO₂R₁₅;

R_{14} in each functional group is independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF₂, CF₃ and COR₁₅;

R_{15} and R_{15}' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl and -CN;

AA and BB each independently is selected from the group consisting of hydrogen, halo, cyano (-CN), nitro (-NO₂), alkyl or substituted alkyl and OR₁₄; and

P is an integer from 0 to 2,
 then Z is not O.

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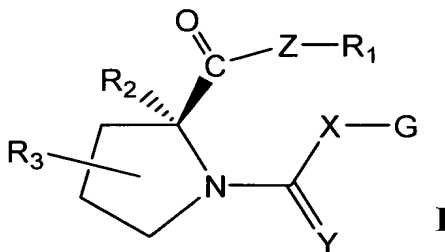
CERTIFICATE OF CORRECTION

Page 9 of 12

PATENT NO. .: 7,632,858 B2
 APPLICATION NO .: 10/712,456
 DATED .: DECEMBER 15, 2009
 INVENTOR(S) .: LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

12. A compound of formula I



or a pharmaceutically acceptable salt thereof,
 wherein:

R_1 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH_2OR_4 ;

R_2 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo, heteroaryl or substituted heteroaryl and CH_2OR_4 ;

R_3 is selected from the group consisting of alkyl or substituted alkyl, and CH_2OR_4 ;

R_4 and R_4' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or

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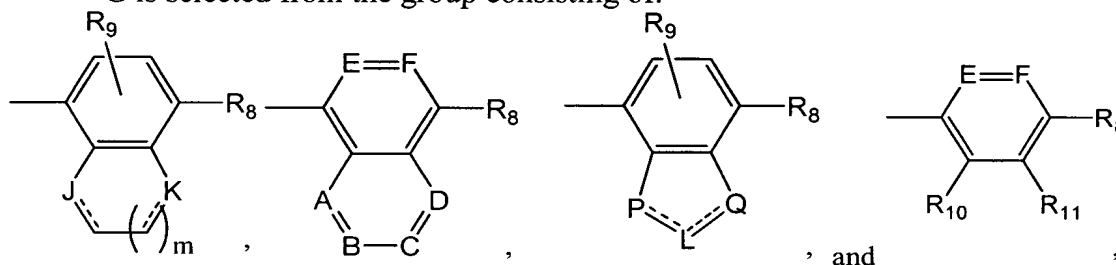
Page 10 of 12

PATENT NO. : 7,632,858 B2
 APPLICATION NO : 10/712,456
 DATED : DECEMBER 15, 2009
 INVENTOR(S) : LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo and heteroaryl or substituted heteroaryl;

G is selected from the group consisting of:



wherein:

R₈ is CN;

R₉, R₁₀, and R₁₁ are each independently selected from the group consisting of hydrogen (H), NO₂, CN, CF₃, OR₄, CO₂R₄, NR₄R₄', CONR₄R₄', CH₂OR₄, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;

A to F each independently is selected from among N and CR₁;

J, K, L, P, and Q each independently is selected from among NR₁₂, O, S, SO, SO₂ or CR₁₂R₁₂';

R₁₂ and R₁₂' in each functional group are each independently selected from a bond or R₁;

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Page 11 of 12

PATENT No. .: 7,632,858 B2
 APPLICATION NO .: 10/712,456
 DATED .: DECEMBER 15, 2009
 INVENTOR(S) .: LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

m is an integer of 0 or 1 ;

X is a linking group selected from the group consisting of NR_4 and CHR_4 ;

Y is selected from the group consisting of O, NR_4 , NOR_4 , S and CH_2 ; and

Z is $-\text{O}-$ or NR_4 ;

with the following provisos:

- (a) when Y is NOR_4 , R_4 is not hydrogen;
- (b) when R_1 is methyl, X is NH, and Y is O or S, then Z is not O;
- (c) when
 - (i) R_1 is methyl,
 - (ii) X is NH,
 - (iii) Y is NR_4 ,
 - (iv) R_4 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl, and
 - (v) G has the following structure:

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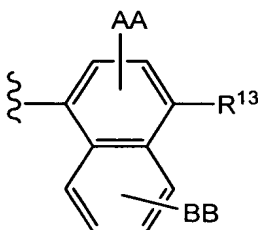
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Page 12 of 12

PATENT No. .: 7,632,858 B2
 APPLICATION NO .: 10/712,456
 DATED .: DECEMBER 15, 2009
 INVENTOR(S) .: LAWRENCE G. HAMANN *ET AL.*

It is certified that an error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:



wherein:

R_{13} is selected from the group consisting of hydrogen, cyano (-CN), nitro (-NO₂), halo, heterocyclo, OR₁₄, CO₂R₁₅, CONHR₁₅, COR₁₅, S(O)_pR₁₅, SO₂NR₁₅R_{15'}, NHCOR₁₅ and NHSO₂R₁₅;

R_{14} in each functional group independently is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF₂, CF₃ and COR₁₅;

R_{15} and $R_{15'}$ in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl and CN;

AA and BB each independently is selected from the group consisting of hydrogen, halo, cyano (-CN), nitro (-NO₂), alkyl or substituted alkyl and OR₁₄; and
 p is an integer from 0 to 2,
 then Z is not O.

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Applicant : Lawrence G. Hamann *et al.*
Patent No. : 7,632,858
Issued : December 15, 2009
Serial No. : 10/712,456
Filed : November 13, 2003

Attorney's Docket No.: 3800024.00560 / 4207
Certificate of Correction

PRELIMINARY AMENDMENT AND REQUEST FOR CONTINUED EXAMINATION
DATED 09 APRIL 2009



Attorney's Docket No.: 0119378-00560 / 4207

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hamann *et al.* Art Unit : 1624
Serial No. : 10/712,456 Examiner : V. Balasubramanian
Filed : November 13, 2003 Confirm. No.: 9300
Title : **OPEN-CHAIN PROLYL UREA-RELATED MODULATORS OF
ANDROGEN RECEPTOR FUNCTION**

Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

**PRELIMINARY AMENDMENT AND
REQUEST FOR CONTINUED EXAMINATION (RCE)**

Dear Sir:

This preliminary amendment is filed with a Request for Continued Examination (RCE) of the above-captioned application. Entry of the following amendments and consideration of the following remarks are respectfully requested.

Amendments to the claims are reflected in the listing of the claims, which begin on page 2 of this paper.

Remarks/Arguments begin on page 10 of this paper.

A Supplemental Information Disclosure Statement accompanies this response.

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"Express Mail" Mailing Label Number EM 315453884 US
Date of Deposit: April 9, 2009

I hereby certify that this paper is being deposited with the United States Postal "Express Mail Post Office to Addressee" Service under 37 CFR §1.10 on the date indicated above and is addressed to: Mail Stop RCE, Commissioner for Patents, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA, 22313-1450.

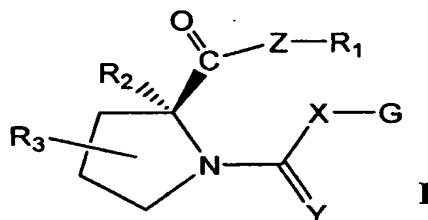

Christopher Ochs

AMENDMENTS TO THE CLAIMS:

Claims 1, 4-8 and 10-19 are pending. Please amend claim 1, 4-8 and 11-19 as indicated below. This listing of claims replaces all prior versions and listings of claims in the application.

LISTING OF CLAIMS:

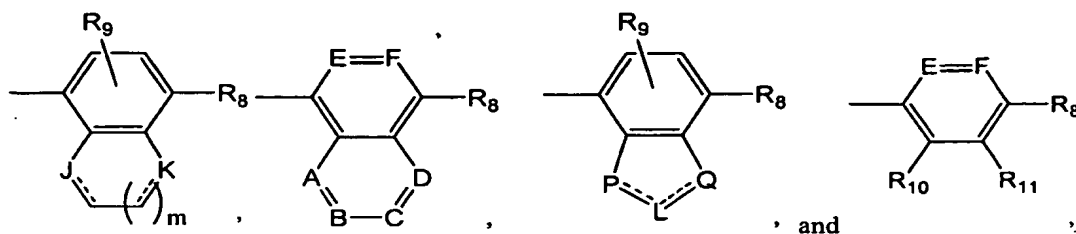
1. (Currently amended) A compound of the formula I



or a pharmaceutically acceptable salt thereof,

wherein:

- R₁ is selected from the group consisting of alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH₂OR₄;
- R₂ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocycle or substituted heterocycle, heteroaryl or substituted heteroaryl and CH₂OR₄;
- R₃ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CH₂OR₄, OR₂, SR₂, halo, NHR₂, NHCOR₄, and NHCONR₄R₄';
- R₄ and R₄' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocycle or substituted heterocycle and heteroaryl or substituted heteroaryl;
- G is selected from the group of:



wherein:

R₈ is CN;

R₉, R₁₀, and R₁₁ are each independently selected from the group consisting of hydrogen (H), NO₂, CN, CF₃, OR₄, CO₂R₄, NR₄R₄', CONR₄R₄', CH₂OR₄, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;

A to F are each independently is selected from among N and CR₁;

J, K, L, P, and Q are each independently is selected from among NR₁₂, O, S, SO, SO₂ or CR₁₂R₁₂';

R₁₂ and R₁₂' in each functional group are each independently selected from a bond or R₁;

m is an integer of 0 or 1 ;

X is a linking group selected from the group consisting of NR₄ and CHR₄;

Y is selected from the group consisting of O, NR₄, NOR₄, S and CH₂; and

Z is -O- or NR₄;

with the following provisos:

(a) when Y is NOR₄, R₄ is not hydrogen;

(b) when R₁ is methyl,

X is NH, [[:]] and

Y is O or S, then

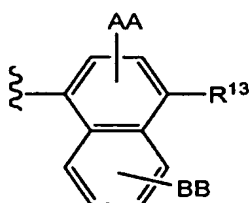
Z is not O;

(c) when (i) R₁ is methyl,

(ii) X is NH,

(iii) Y is NR₄,

- (iv) R_4 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl, and
- (v) G has the following structure:



wherein:

- R_{13} is selected from the group consisting of hydrogen, cyano (-CN), nitro (-NO₂), halo, heterocyclo, OR₁₄, CO₂R₁₅, CONHR₁₅, COR₁₅, S(O)_pR₁₅, SO₂NR₁₅NR₁₅', NHCOR₁₅ and NHSO₂R₁₅;
- R_{14} in each functional group is independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF₂, CF₃ and COR₁₅;
- R_{15} and R_{15}' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl and -CN;
- AA and BB are each independently is selected from the group consisting of hydrogen, halo, cyano (-CN), nitro (-NO₂), alkyl or substituted alkyl and OR₁₄; and
- p is an integer from 0 to 2,

then Z is not O.

Applicant : Hamann *et al.*
Serial No. : 10/712,456
Filed : November 13, 2003

Attorney's Docket No.: 0119378-00560 / 4207
RCE & Preliminary Amendment

2. (Cancelled).
3. (Cancelled).
4. (Currently amended) The compound ~~as defined in~~ of claim 1, or a pharmaceutically acceptable salt thereof, wherein:
R₁ is alkyl;
R₂ is hydrogen or alkyl;
R₃ is hydroxyl;
Y is O; and
Z is O.
5. (Currently amended) A pharmaceutical composition, comprising:
a compound or salt ~~as defined in~~ of claim 1; and
a pharmaceutically acceptable carrier therefor.
6. (Currently amended) The pharmaceutical composition ~~as defined in~~ of claim 5, further comprising a growth promoting agent.
7. (Currently amended) A pharmaceutical composition, comprising:
a compound ~~as defined in~~ of claim 1, or a pharmaceutically acceptable salt thereof, and
at least one additional therapeutic agent selected from the group consisting of
parathyroid hormone, bisphosphonates, estrogen, testosterone, progesterone, selective estrogen receptor modulators, growth hormone secretagogues, growth hormone, progesterone receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-inflammatory agents, antiosteoporosis agents, anti-obesity agents, cardiac glycosides, cholesterol lowering agents, anti-depressants, anti-anxiety agents, anabolic agents, and thyroid mimetics.
8. (Currently amended) A method for treating prostate cancer, comprising:
~~which comprises~~ administering to a mammalian species in need of treatment an effective amount of a compound ~~as defined in~~ of claim 1 or a pharmaceutically acceptable salt thereof.
9. (Cancelled).
10. (Previously presented) A compound selected from the group consisting of
1-(4-Cyano-2-ethyl-3-(trifluoromethyl)phenyl-1-carbamoyl)-3-hydroxy-pyrrolidine-2-carboxylic acid or a pharmaceutically acceptable salt thereof;
1-(4-Cyanonaphthalen-1-ylcarbamoyl-3-hydroxy-pyrrolidine-2-carboxylic acid methyl ester or a pharmaceutically acceptable salt thereof;

1-(5-Chloro-6-cyano-pyridin-3-ylcarbamoyl)-3-hydroxypyrrolidine-2-carboxylic acid methyl ester or a pharmaceutically acceptable salt thereof; and

1-[2-(4-Cyanonaphthalen-1-yl)acetyl]-3-hydroxypyrrolidine-2-carboxylic acid methyl ester or a pharmaceutically acceptable salt thereof.

11. (Currently amended) A pharmaceutical composition, comprising:
a compound ~~as defined in~~ of claim 10, or a pharmaceutically acceptable salt thereof;
[[,]] and a pharmaceutically acceptable carrier therefor.

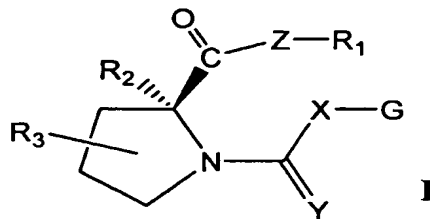
12. (Currently amended) The pharmaceutical composition ~~as defined in~~ of claim 11, further comprising a growth promoting agent.

13. (Currently amended) A pharmaceutical composition, comprising:
a compound ~~as defined in~~ of claim 10, or a pharmaceutically acceptable salt thereof;
[[,]] and

at least one additional therapeutic agent selected from the group consisting of parathyroid hormone, bisphosphonates, estrogen, testosterone, progesterone, selective estrogen receptor modulators, growth hormone secretagogues, growth hormone, progesterone receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-inflammatory agents, antiosteoporosis agents, anti-obesity agents, cardiac glycosides, cholesterol lowering agents, anti-depressants, anti-anxiety agents, anabolic agents, and thyroid mimetics.

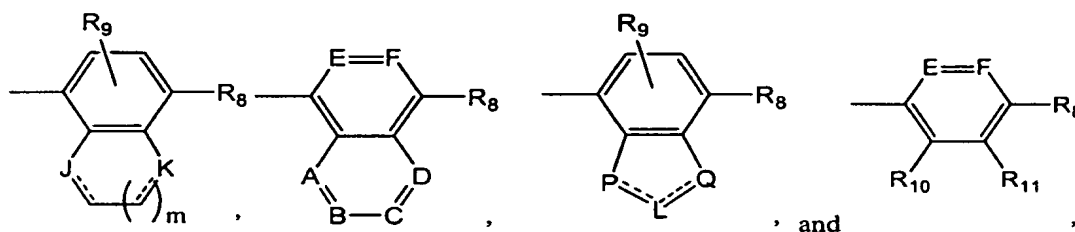
14. (Currently amended) A method for treating prostate cancer, comprising:
~~which comprises~~ administering to a mammalian species in need of treatment an effective amount of a compound ~~as defined in~~ of claim 10 or a pharmaceutically acceptable salt thereof.

15. (Currently amended) A compound of formula I



or a pharmaceutically acceptable salt thereof,
wherein:

- R_1 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH_2OR_4 ;
- R_2 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo, heteroaryl or substituted heteroaryl and CH_2OR_4 ;
- R_3 is selected from the group consisting of alkyl or substituted alkyl, and CH_2OR_4 ;
- R_4 and R_4' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo and heteroaryl or substituted heteroaryl;
- G is selected from the group consisting of:



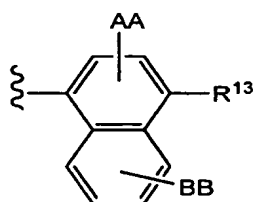
wherein:

- R_8 is CN;
- R_9 , R_{10} , and R_{11} are each independently selected from the group consisting of hydrogen (H), NO_2 , CN, CF_3 , OR_4 , CO_2R_4 , $\text{NR}_4\text{R}_4'$, $\text{CONR}_4\text{R}_4'$, CH_2OR_4 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;
- A to F ~~are~~ each independently is selected from among N and CR_i ;
- J, K, L, P, and Q ~~are~~ each independently is selected from among NR_{12} , O, S, SO, SO_2 or $\text{CR}_{12}\text{R}_{12}'$;
- R_{12} and R_{12}' in each functional group are each independently selected from a bond or R_1 ;

- m is an integer of 0 or 1 ;
X is a linking group selected from the group consisting of NR_4 and CHR_4 ;
Y is selected from the group consisting of O, NR_4 , NOR_4 , S and CH_2 ; and
Z is $-\text{O}-$ or NR_4 ;

with the following provisos:

- (a) when Y is NOR_4 , R_4 is not hydrogen;
(b) when R_1 is methyl, X is NH , and Y is O or S, then Z is not O;
(c) when
(i) R_1 is methyl,
(ii) X is NH ,
(iii) Y is NR_4 ,
(iv) R_4 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl, and
(v) G has the following structure:



wherein:

- R_{13} is selected from the group consisting of hydrogen, cyano ($-\text{CN}$), nitro ($-\text{NO}_2$), halo, heterocyclo, OR_{14} , CO_2R_{15} , CONHR_{15} , COR_{15} , $\text{S(O)}_p\text{R}_{15}$, $\text{SO}_2\text{NR}_{15}\text{NR}_{15}'$, NHCOR_{15} and $\text{NHSO}_2\text{R}_{15}$;
 R_{14} in each functional group is independently is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF_2 , CF_3 and COR_{15} ;
 R_{15} and R_{15}' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or

substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl and CN;

AA and BB are each independently is selected from the group consisting of hydrogen, halo, cyano (-CN), nitro (-NO₂), alkyl or substituted alkyl and OR₁₄; and

p is an integer from 0 to 2,

then Z is not O.

16. (Currently amended) A pharmaceutical composition, comprising:
a compound ~~as defined in~~ of claim 15, or a pharmaceutically acceptable salt thereof;
[[,]] and
a pharmaceutically acceptable carrier therefor.

17. (Currently amended) The pharmaceutical composition ~~as defined in~~ of claim 16, further comprising a growth promoting agent.

18. (Currently amended) A pharmaceutical composition, comprising:
a compound ~~as defined in~~ of claim 15, or a pharmaceutically acceptable salt thereof;
[[,]] and

at least one additional therapeutic agent selected from the group consisting of parathyroid hormone, bisphosphonates, estrogen, testosterone, progesterone, selective estrogen receptor modulators, growth hormone secretagogues, growth hormone, progesterone receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-inflammatory agents, antiosteoporosis agents, anti-obesity agents, cardiac glycosides, cholesterol lowering agents, anti-depressants, anti-anxiety agents, anabolic agents, and thyroid mimetics.

19. (Currently amended) A method for treating prostate cancer, comprising:
~~which comprises~~ administering to a mammalian species in need of treatment an effective amount of a compound ~~as defined in~~ of claim 15 or a pharmaceutically acceptable salt thereof.

Applicant : Hamann *et al.*
Serial No. : 10/712,456
Filed : November 13, 2003

Attorney's Docket No.: 0119378-00560 / 4207
RCE & Preliminary Amendment

REMARKS

The requisite fee for filing a Request for Continued Examination and any other fees that may be due in connection with the filing of this paper or with this application should be charged to Deposit Account No. 02-1818. If a Petition for Extension of Time is needed, this paper is to be considered such Petition. A supplemental Information Disclosure Statement is filed herewith.

Claims 1, 4-8 and 10-19 are pending. Claims 1, 4-8 and 10-19 previously were allowed. Claims 1, 4-8 and 11-19 are amended to correct formatting and typographical errors. No new matter is added.

* * *

In view of the amendment and remarks herein, allowance of the application respectfully is requested.

Respectfully submitted,

Stephanie Seidman
Reg. No. 33,779

Attorney Docket No. 0119378-00560 / 4207
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Applicant : Lawrence G. Hamann *et al.*
Patent No. : 7,632,858
Issued : December 15, 2009
Serial No. : 10/712,456
Filed : November 13, 2003

Attorney's Docket No.: 3800024.00560 / 4207
Certificate of Correction

AMENDMENT PURSUANT TO 37 C.F.R. §1.312
DATED 07 OCTOBER 2009



Attorney Docket No. 3800024.00560 / 4207

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Hamann *et al.* Art Unit : 1624
Serial No. : 10/712,456 Examiner : V. Balasubramanian
Filed : November 13, 2003 Confirm. No.: 9300
Title : **OPEN-CHAIN PROLYL UREA-RELATED MODULATORS OF
ANDROGEN RECEPTOR FUNCTION**

Mail Stop ISSUE FEE
Commissioner for Patents
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT PURSUANT TO 37 C.F.R. §1.312

Dear Sir:

Entry of the following amendment and consideration of the following remarks respectfully are requested. This amendment is filed concurrently with the payment of the issue fee.

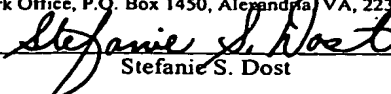
Amendments to the Claims begin on page 2 of this paper.

Remarks begin on page 10 of this paper.

A copy of the Supplemental Information Disclosure Statement, mailed April 9, 2009, is provided.

CERTIFICATE OF MAILING BY "EXPRESS MAIL"
"Express Mail" Mailing Label Number **EM 315455134 US**
Date of Deposit **October 07, 2009**

I hereby certify that this paper is being deposited with the United States Postal "Express Mail Post Office to Addressee" Service under 37 CFR §1.10 on the date indicated above and is addressed to: Mail Stop Issue Fee, Commissioner for Patents, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria VA, 22313-1450.

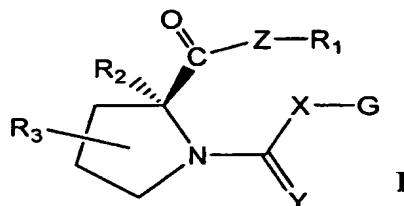

Stefanie S. Dost

Amendments to the Claims:

Please amend claims 1, 4, 5, 10 and 15 as follows. This listing of claims replaces all prior versions and listings of claims in the application.

Listing of Claims:

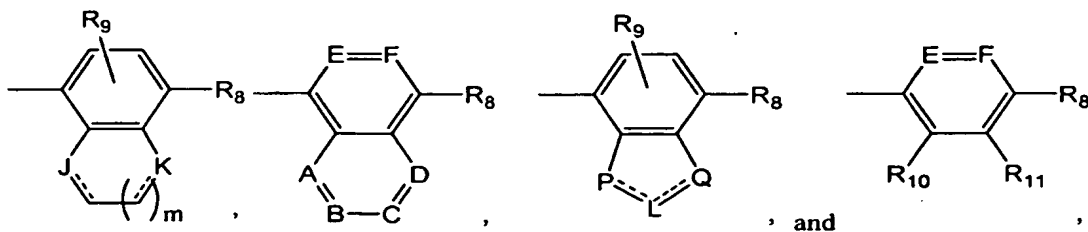
1. (Currently amended) A compound of the formula I



or a pharmaceutically acceptable salt thereof,

wherein:

- R_1 is selected from the group consisting of alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH_2OR_4 ;
- R_2 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocycle or substituted heterocycle, heteroaryl or substituted heteroaryl and CH_2OR_4 ;
- R_3 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CH_2OR_4 , OR_2 , SR_2 , halo, NHR_2 , NHCOR_4 , and $\text{NHCONR}_4\text{R}_4'$;
- R_4 and R_4' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocycle or substituted heterocycle and heteroaryl or substituted heteroaryl;
- G is selected from the group of among:



wherein:

R_8 is CN;

R_9 , R_{10} , and R_{11} are each independently selected from the group consisting of hydrogen (H), NO_2 , CN, CF_3 , OR_4 , CO_2R_4 , NR_4R_4' , $CONR_4R_4'$, CH_2OR_4 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;

A to F each independently is selected from among N and CR_1 ;

J, K, L, P, and Q each independently is selected from among NR_{12} , O, S, SO, SO_2 or $CR_{12}R_{12}'$;

R_{12} and R_{12}' in each functional group are each independently selected from a bond or R_1 ;

m is an integer of 0 or 1 ;

X is a linking group selected from the group consisting of NR_4 and CHR_4 ;

Y is selected from the group consisting of O, NR_4 , NOR_4 , S and CH_2 ; and

Z is $-O-$ or NR_4 ;

with the following provisos:

(a) when Y is NOR_4 , R_4 is not hydrogen;

(b) when R_1 is methyl,

X is NH, and

Y is O or S, then

Z is not O;

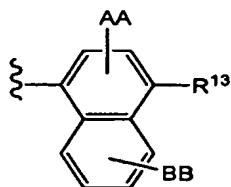
(c) when (i) R_1 is methyl,

(ii) X is NH,

(iii) Y is NR_4 ,

(iv) R_4 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl, and

(v) G has the following structure:



wherein:

R_{13} is selected from the group consisting of hydrogen, cyano (-CN), nitro (-NO₂), halo, heterocyclo, OR₁₄, CO₂R₁₅, CONHR₁₅, COR₁₅, S(O)_pR₁₅, ~~SO₂NR₁₅NR₁₅'~~
SO₂NR₁₅R₁₅', NHCOR₁₅ and NHSO₂R₁₅;

R_{14} in each functional group is independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF₂, CF₃ and COR₁₅;

R_{15} and R_{15}' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl and -CN;

AA and BB each independently is selected from the group consisting of hydrogen, halo, cyano (-CN), nitro (-NO₂), alkyl or substituted alkyl and OR₁₄; and

p is an integer from 0 to 2,

then Z is not O.

2. and 3. (Cancelled).

4. (Currently amended) The compound of claim 1, or a pharmaceutically acceptable salt of claim 1 thereof, wherein:

R_1 is alkyl;

R_2 is hydrogen or alkyl;

R_3 is hydroxyl;

X is NR₄;

Y is O; and

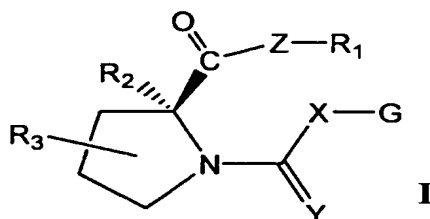
Z is O.

5. (Previously presented) A pharmaceutical composition, comprising:
a compound or salt of claim 1; and
a pharmaceutically acceptable carrier therefor.
6. (Previously presented) The pharmaceutical composition of claim 5, further comprising a growth promoting agent.
7. (Currently amended) A pharmaceutical composition, comprising:
a compound of claim 1, or a pharmaceutically acceptable salt thereof, of claim 1; and
at least one additional therapeutic agent selected from the group consisting of
parathyroid hormone, bisphosphonates, estrogen, testosterone, progesterone, selective
estrogen receptor modulators, growth hormone secretagogues, growth hormone, progesterone
receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-inflammatory agents,
antiosteoporosis agents, anti-obesity agents, cardiac glycosides, cholesterol lowering agents,
anti-depressants, anti-anxiety agents, anabolic agents, and thyroid mimetics.
8. (Currently amended) A method for treating prostate cancer, comprising:
administering to a mammalian species in need of treatment an effective amount of a
compound of claim 1 or a pharmaceutically acceptable salt thereof of claim 1.
- 9 (Cancelled).
10. (Currently amended) A compound selected from the group consisting of
1-(4-Cyano-2-ethyl-3-(trifluoromethyl)phenyl-1-carbamoyl)-3-hydroxy-pyrrolidine-2-
carboxylic acid or a pharmaceutically acceptable salt thereof;
1-(4-Cyanonaphthalen-1-ylcarbamoyl)-3-hydroxy-pyrrolidine-2-carboxylic acid methyl
ester or a pharmaceutically acceptable salt thereof;
1-(5-Chloro-6-cyano-pyridin-3-ylcarbamoyl)-3-hydroxypyrrolidine-2-carboxylic acid
methyl ester or a pharmaceutically acceptable salt thereof; and
1-[2-(4-Cyanonaphthalen-1-yl)acetyl]-3-hydroxypyrrolidine-2-carboxylic acid methyl
ester or a pharmaceutically acceptable salt thereof.
11. (Previously presented) A pharmaceutical composition, comprising:
a compound of claim 10, or a pharmaceutically acceptable salt thereof; and
a pharmaceutically acceptable carrier therefor.
12. (Previously presented) The pharmaceutical composition of claim 11, further
comprising a growth promoting agent.

13. (Previously presented) A pharmaceutical composition, comprising:
a compound of claim 10, or a pharmaceutically acceptable salt thereof; and
at least one additional therapeutic agent selected from the group consisting of
parathyroid hormone, bisphosphonates, estrogen, testosterone, progesterone, selective
estrogen receptor modulators, growth hormone secretagogues, growth hormone, progesterone
receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-inflammatory agents,
antiosteoporosis agents, anti-obesity agents, cardiac glycosides, cholesterol lowering agents,
anti-depressants, anti-anxiety agents, anabolic agents, and thyroid mimetics.

14. (Previously presented) A method for treating prostate cancer, comprising:
administering to a mammalian species in need of treatment an effective amount of a
compound of claim 10 or a pharmaceutically acceptable salt thereof.

15. (Currently amended) A compound of formula I

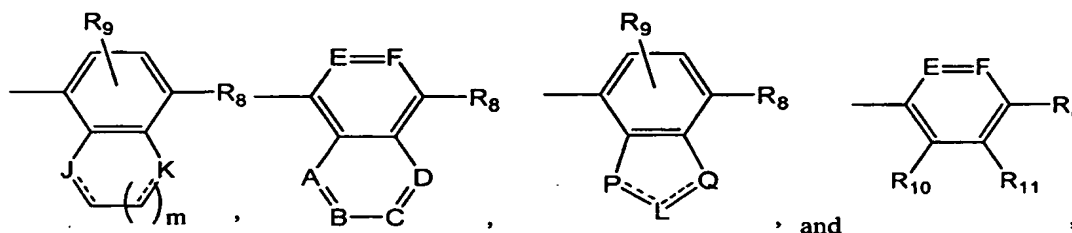


or a pharmaceutically acceptable salt thereof,
wherein:

- R₁ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH₂OR₄;
- R₂ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo, heteroaryl or substituted heteroaryl and CH₂OR₄;
- R₃ is selected from the group consisting of alkyl or substituted alkyl, and CH₂OR₄;
- R₄ and R₄' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or

substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo and heteroaryl or substituted heteroaryl;

G is selected from the group consisting of:



wherein:

R₈ is CN;

R₉, R₁₀, and R₁₁ are each independently selected from the group consisting of hydrogen (H), NO₂, CN, CF₃, OR₄, CO₂R₄, NR₄R₄', CONR₄R₄', CH₂OR₄, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;

A to F each independently is selected from among N and CR₁;

J, K, L, P, and Q each independently is selected from among NR₁₂, O, S, SO, SO₂ or CR₁₂R₁₂';

R₁₂ and R₁₂' in each functional group are each independently selected from a bond or R₁;

m is an integer of 0 or 1 ;

X is a linking group selected from the group consisting of NR₄ and CHR₄;

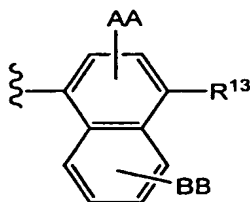
Y is selected from the group consisting of O, NR₄, NOR₄, S and CH₂; and

Z is -O- or NR₄;

with the following provisos:

- (a) when Y is NOR₄, R₄ is not hydrogen;
- (b) when R₁ is methyl, X is NH, and Y is O or S, then Z is not O;
- (c) when
 - (i) R₁ is methyl,
 - (ii) X is NH,
 - (iii) Y is NR₄,

- (iv) R_4 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl, and
- (v) G has the following structure:



wherein:

- R_{13} is selected from the group consisting of hydrogen, cyano (-CN), nitro (-NO₂), halo, heterocyclo, OR₁₄, CO₂R₁₅, CONHR₁₅, COR₁₅, S(O)_pR₁₅, SO₂NR₁₅NR₁₅', SO₂NR₁₅R₁₅', NHCOR₁₅ and NHSO₂R₁₅;
- R_{14} in each functional group is independently is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF₂, CF₃ and COR₁₅;
- R_{15} and R_{15}' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl and CN;
- AA and BB each independently is selected from the group consisting of hydrogen, halo, cyano (-CN), nitro (-NO₂), alkyl or substituted alkyl and OR₁₄; and
- p is an integer from 0 to 2,

then Z is not O.

16. (Currently amended) A pharmaceutical composition, comprising:
a compound of claim 15, or a pharmaceutically acceptable salt ~~thereof~~ of claim 15; and
a pharmaceutically acceptable carrier therefor.

Applicant : Hamann *et al.*
Serial No. : 10/712,456
Filed : November 13, 2003

Attorney Docket No. 3800024.00560 / 4207
Amendment Pursuant to 37 C.F.R. §1.312

17. (Previously presented) The pharmaceutical composition of claim 16, further comprising a growth promoting agent.

18. (Currently amended) A pharmaceutical composition, comprising:
a compound of claim 15, or a pharmaceutically acceptable salt ~~thereof~~ of claim 15; and
at least one additional therapeutic agent selected from the group consisting of
parathyroid hormone, bisphosphonates, estrogen, testosterone, progesterone, selective
estrogen receptor modulators, growth hormone secretagogues, growth hormone, progesterone
receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-inflammatory agents,
antiosteoporosis agents, anti-obesity agents, cardiac glycosides, cholesterol lowering agents,
anti-depressants, anti-anxiety agents, anabolic agents, and thyroid mimetics.

19. (Currently amended) A method for treating prostate cancer, comprising:
administering to a mammalian species in need of treatment an effective amount of a
compound of claim 15 or a pharmaceutically acceptable salt ~~thereof~~ of claim 15.

Applicant : Hamann *et al.*
Serial No. : 10/712,456
Filed : November 13, 2003

Attorney Docket No. 3800024.00560 / 4207
Amendment Pursuant to 37 C.F.R. §1.312

REMARKS

The requisite fee of \$1852.00 for payment of the Issue Fee for a large entity (\$1510), publication fee (\$300) and an advance order of 14 copies of the issued patent (\$42), and any other fees that may be due in connection with this paper or this application during its entire pendency, should be charged to Deposit Account No. 02-1818. If a Petition for extension of time is needed, this paper is to be considered such Petition.

Supplemental Information Disclosure Statement

Pursuant to the Request of the Examiner, provided herein is a copy of a supplemental Information Disclosure Statement that was mailed April 9, 2009. Receipt of the Supplemental Disclosure Statement was acknowledged by the Office as evidenced by the date stamp on the first page, indicating the date of April 9, 2009. The Supplemental Information Disclosure Statement included a copy of an Office Action that issued in a related case, and a Table with a box for the Examiner to initial that the Examiner considered the Office Action. The Supplemental Information Statement was mis-coded in the system as a Transmittal Letter. Applicant's representative contacted Examiner Balasubramania, who requested that a copy of the Table be included with the Issue Fee. Examiner Balasubramania indicated that he would initial the table evidencing consideration of the Office Action from the related case.

Amendment of the Claims

Claims 1, 4-8 and 10-19 are allowed. Upon review of the claims in preparation of payment of the issue fee, it has been determined that claims 1, 4, 7, 8, 10, 16, 18 and 19 contain inadvertant errors, which are addressed by the amendments herein. Claim 1 is amended to correct grammatical errors by replacing the recitation "A compound of the formula I" with "A compound of formula I" and to amend the definition of substituent G by replacing the recitation "from the group of" with the recitation "from among." Claims 1 and 15 are amended to correct an inadvertant typographical error in the definition of substituent R¹³, by replacing the recitation SO₂NR₁₅NR₁₅' with the recitation SO₂NR₁₅R₁₅'. Basis for this amendment is found in claim 1 as originally filed. Claim 4 is amended to include the recitation "X is NR₄." Basis for this amendment is found in original claim 4.

Claims 4, 7 and 8 are amended to replace the recitation "or a pharmaceutically acceptable salt *thereof*" with the recitation "or a pharmaceutically acceptable salt of claim 1" for proper dependency of the claims. Claims 4, 7 and 8 each ultimately depend from claim 1,

Applicant : Hamann *et al.*
Serial No. : 10/712,456
Filed : November 13, 2003

Attorney Docket No. 3800024.00560 / 4207
Amendment Pursuant to 37 C.F.R. §1.312

which recites "or a pharmaceutically acceptable salt *thereof*." Thus, claim 1 is directed to a compound of formula I or a pharmaceutically acceptable salt of a compound of formula I. Therefore, claims 4, 7 and 8 should recite "or a pharmaceutically acceptable salt of claim 1" for proper dependency.

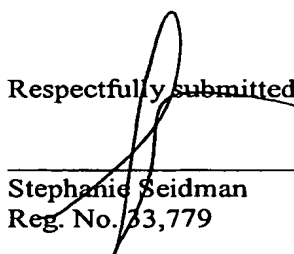
Claim 10 is amended to correct a typographical error by inserting an omitted parenthesis in the second recited compound. Claim 10 is amended by replacing the recitation "1-(4-Cyanonaphthalen-1-ylcarbamoyl-3-hydroxy-pyrrolidine-2-carboxylic" with the recitation "1-(4-Cyanonaphthalen-1-ylcarbamoyl)-3-hydroxy-pyrrolidine-2-carboxylic."

Claims 16, 18 and 19 are amended to replace the recitation "or a pharmaceutically acceptable salt *thereof*" with the recitation "or a pharmaceutically acceptable salt of claim 15" for proper dependency of the claims. Claims 16, 18 and 19 each ultimately depend from claim 15, which recites "or a pharmaceutically acceptable salt *thereof*." Thus, claim 15 is directed to a compound of formula I or a pharmaceutically acceptable salt of a compound of formula I. Therefore, claims 16, 18 and 19 should recite "or a pharmaceutically acceptable salt of claim 15" for proper dependency. No new matter is added. Accordingly, entry of this amendment respectfully is requested.

* * *

Entry of these remarks and the amendment into the file history of the above-captioned application respectfully is requested.

Respectfully submitted,


Stephanie Seidman
Reg. No. 33,779

Attorney Docket No. 3800024.00560 / 4207
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Applicant : Lawrence G. Hamann *et al.*
Patent No. : 7,632,858
Issued : December 15, 2009
Serial No. : 10/712,456
Filed : November 13, 2003

Attorney's Docket No.: 3800024.00560 / 4207
Certificate of Correction

RESPONSE TO OFFICIAL ACTION AND AMENDMENT
DATED 18 APRIL 2008

CASE: 1073.134A

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF
Lawrence HAMANN, et al.
APPLICATION NO: 10/712,456
FILED: November 13, 2003

ART UNIT: 1624
EXAMINER: BALASUBRAMANIAN,
VENKATARAMAN

FOR: OPEN CHAIN PROLYL UREA-RELATED MODULATORS OF
ANDROGEN RECEPTOR FUNCTION

FILED VIA USPTO EFS-WEB

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICIAL ACTION

This is a response to the Official Action mailed January 24, 2008.

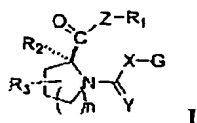
Amendments begin on page 2.

Remarks begin on page 10.

CLAIM AMENDMENTS

Please amend the claims as follows. This listing of claims replaces all previous listings.

1 (Currently amended) A compound ~~or a pharmaceutically acceptable salt or a stereoisomer of~~ formula I



or a pharmaceutically acceptable salt thereof

wherein

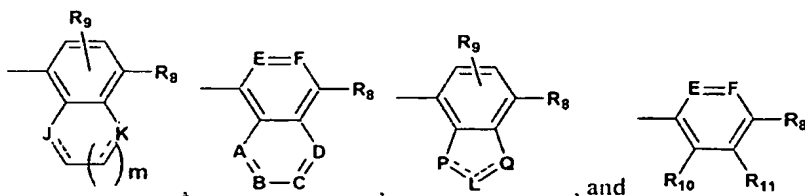
R₁ is selected from the group consisting of ~~hydrogen~~, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH₂OR₄;

R₂ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo, heteroaryl or substituted heteroaryl, and CH₂OR₄;

R₃ is selected from the group consisting of hydrogen, alkyl or substituted alkyl, CH₂OR₄, OR₂, SR₂, halo, NHR₂, NHCOR₄, NHCO₂R₄, NHCONR₄R₄', and NHSO₂R₄;

R₄ and R₄' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo, and heteroaryl or substituted heteroaryl;

G is selected from the group consisting of:



wherein

R₈ is CN;

R_9 , R_{10} and R_{11} are each independently selected from the group consisting of hydrogen (H), NO_2 , CN , CF_3 , OR_4 , CO_2R_4 , $\text{NR}_4\text{R}_4'$, $\text{CONR}_4\text{R}_4'$, CH_2OR_4 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;

A to F ~~is~~ are each independently selected from N or and CR_1 ;

J, K, L, P and Q are each independently selected from NR_{12} , O, S, SO, SO_2 , or $\text{CR}_{12}\text{R}_{12}'$;

R_{12} and R_{12}' in each functional group are each independently selected from a bond or R_1 ; ~~and~~

m is an integer of 0 or 1;

X is a linking group selected from the group consisting of NR_4 and CHR_4 ;

Y is selected from the group consisting of O, NR_4 , NOR_4 , S and CH_2 ;

Z is -O- or NR_4 ; and

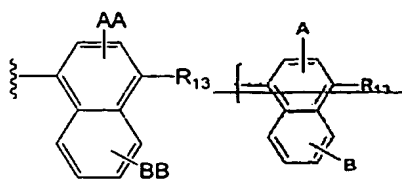
n is an integer of 1 or 2;

with the following provisos:

(a) when Y is NOR_4 , R_4 is not hydrogen;

(b) ~~excluding compounds where the following occur simultaneously: when~~ R_1 is methyl;
X is NH_2 ; and
Y is O or S; and then
Z is not O;

(c) ~~when excluding compounds where the following occur simultaneously:~~ (i) R_1 is methyl;
(ii) X is NH_2 ;
~~Z is O;~~
(iii) Y is NR_4 ;
(iv) R_4 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;
and
(v) G has the following structure:



wherein

- R_{13} is selected from the group consisting of hydrogen, cyano (-CN), nitro (-NO₂), halo, heterocyclo, OR₁₄, CO₂R₁₅, CONHR₁₅, COR₁₅, S(O)_pR₁₅, SO₂NR₁₅R_{15'}, NHCOR₁₅ and NHSO₂R₁₅;
- R_{14} in each functional group is independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF₂, CF₃, and COR₁₅;
- R_{15} and R_{15}' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, and -CN;
- \underline{AA} and \underline{BB} are each independently selected from the group consisting of hydrogen, halo, cyano(-CN), nitro(-NO₂), alkyl or substituted alkyl, and OR₁₄; and
- p is an integer from 0 to 2;

then Z is not O.

2. (cancelled)

3 (cancelled)

4. (Currently amended) The compound as defined in claim 1, or a pharmaceutically acceptable salt thereof, wherein

R_1 is ~~hydrogen or alkyl~~;

R_2 is hydrogen or alkyl;

R₃ is hydroxyl;
X is NR₄;
Y is O;
Z is O;
and n is 1

5. (Currently amended) A pharmaceutical composition comprising ~~the a~~ compound as defined in claim 1, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier therefore.

6. (Original) The pharmaceutical composition as defined in claim 5 further comprising a growth promoting agent.

7. (Currently amended) A pharmaceutical composition comprising a compound as defined in claim 1, or a pharmaceutically acceptable salt thereof, and at least one additional therapeutic agent selected from the group consisting of parathyroid hormone, bisphosphonates, estrogen, testosterone, progesterone, selective estrogen receptor modulators, growth hormone secretagogues, growth hormone, progesterone receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-inflammatory agents, anti-osteoporosis agents, anti-obesity agents, cardiac glycosides, cholesterol lowering agents, anti-depressants, anti-anxiety agents, anabolic agents, and thyroid mimetics.

8. (Currently amended) A method for treating prostate cancer which comprises administering to a mammalian species in need of treatment an effective amount of a compound as defined in claim 1 or a pharmaceutically acceptable salt thereof.

9.(cancelled)

10. (Currently amended) A compound selected from the group consisting of 1-(4-Cyano-2-ethyl-3-(trifluoromethyl)phenyl-1-carbamoyl)-3-hydroxy-pyrrolidine-2-carboxylic acid methyl ester or a pharmaceutically acceptable salt thereof,

1-(4-Cyanonaphthalen-1-ylcarbamoyl)-3-hydroxy-pyrrolidine-2-carboxylic acid methyl ester or
a pharmaceutically acceptable salt thereof;

1-(5-Chloro-6-cyano-pyridin-3-ylcarbamoyl)-3-hydroxypyrrolidine-2-carboxylic acid methyl
ester or a pharmaceutically acceptable salt thereof; and

1-[2-(4-Cyanonaphthalen-1-yl)acetyl]-3-hydroxypyrrolidine-2-carboxylic acid methyl ester or a
pharmaceutically acceptable salt thereof.

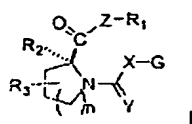
11. (new) A pharmaceutical composition comprising the a compound as defined in claim 10, or a
pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier therefor.

12. (new) The pharmaceutical composition as defined in claim 11 further comprising a growth
promoting agent.

13 (new) A pharmaceutical composition comprising a compound as defined in claim 10, or a
pharmaceutically acceptable salt thereof, and at least one additional therapeutic agent selected
from the group consisting of parathyroid hormone, bisphosphonates, estrogen, testosterone,
progesterone, selective estrogen receptor modulators, growth hormone secretagogues, growth
hormone, progesterone receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-
inflammatory agents, anti-osteoporosis agents, anti-obesity agents, cardiac glycosides,
cholesterol lowering agents, anti-depressants, anti-anxiety agents, anabolic agents, and thyroid
mimetics.

14. (new) A method for treating prostate cancer which comprises administering to a mammalian
species in need of treatment an effective amount of a compound as defined in claim 10 or a
pharmaceutically acceptable salt thereof.

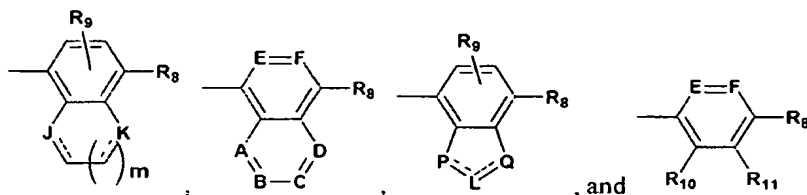
15. (new) A compound of formula I



or a pharmaceutically acceptable salt thereof
wherein

- R_1 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, and CH_2OR_4 ;
- R_2 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo, heteroaryl or substituted heteroaryl, and CH_2OR_4 ;
- R_3 is selected from the group consisting of alkyl or substituted alkyl, and CH_2OR_4 ;
- R_4 and R_4' for each occurrence are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, heterocyclo or substituted heterocyclo, and heteroaryl or substituted heteroaryl;

G is selected from the group consisting of:



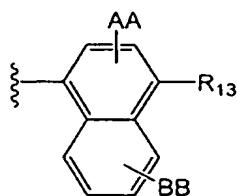
wherein

- R_8 is CN;
- R_9 , R_{10} and R_{11} are each independently selected from the group consisting of hydrogen (H), NO_2 , CN, CF_3 , OR_4 , CO_2R_4 , $\text{NR}_4\text{R}_4'$, $\text{CONR}_4\text{R}_4'$, CH_2OR_4 , alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl;
- A to F are each independently selected from N and CR_1 ;
- J, K, L, P and Q are each independently selected from NR_{12} , O, S, SO, SO_2 , or $\text{CR}_{12}\text{R}_{12}'$;
- R_{12} and R_{12}' in each functional group are each independently selected from a bond or R_1 ,
- m is an integer of 0 or 1,

- X is a linking group selected from the group consisting of NR_4 and CHR_4 ;
Y is selected from the group consisting of O, NR_4 , NOR_4 , S and CH_2 ;
Z is -O- or NR_4 ; and
n is an integer of 1 or 2;

with the following provisos:

- (a) when Y is NOR_4 , R_4 is not hydrogen;
(b) when R_1 is methyl, X is NH, and Y is O or S, then Z is not O;
(c) when
(i) R_1 is methyl,
(ii) X is NH,
(iii) Y is NR_4 ,
(iv) R_4 is selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, cycloalkyl or substituted cycloalkyl, arylalkyl or substituted arylalkyl, aryl or substituted aryl, and heteroaryl or substituted heteroaryl, and
(v) G has the following structure:



wherein

- R_{13} is selected from the group consisting of hydrogen, cyano ($-\text{CN}$), nitro ($-\text{NO}_2$), halo, heterocyclo, OR_{14} , CO_2R_{15} , CONHR_{15} , COR_{15} , $\text{S(O)}_p\text{R}_{15}$, $\text{SO}_2\text{NR}_{15}\text{R}_{15}'$, NHCOR_{15} and $\text{NHSO}_2\text{R}_{15}$;
 R_{14} in each functional group is independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, CHF_2 , CF_3 , and COR_{15} ;
 R_{15} and R_{15}' in each functional group are each independently selected from the group consisting of hydrogen, alkyl or substituted alkyl, alkenyl or substituted alkenyl, alkynyl or substituted alkynyl, cycloalkyl or substituted cycloalkyl, heterocycloalkyl or substituted heterocycloalkyl,

arylalkyl or substituted arylalkyl, aryl or substituted aryl, heteroaryl or substituted heteroaryl, and -CN;

AA and BB are each independently selected from the group consisting of hydrogen, halo, cyano(-CN), nitro(-NO₂), alkyl or substituted alkyl, and OR₁₄; and

p is an integer from 0 to 2,
then Z is not O.

16. (new) A pharmaceutical composition comprising the a compound as defined in claim 15, or a pharmaceutically acceptable salt thereof, and a pharmaceutically acceptable carrier therefor.

17. (new) The pharmaceutical composition as defined in claim 16 further comprising a growth promoting agent.

18. (new) A pharmaceutical composition comprising a compound as defined in claim 15, or a pharmaceutically acceptable salt thereof, and at least one additional therapeutic agent selected from the group consisting of parathyroid hormone, bisphosphonates, estrogen, testosterone, progesterone, selective estrogen receptor modulators, growth hormone secretagogues, growth hormone, progesterone receptor modulators, anti-diabetic agents, anti-hypertensive agents, anti-inflammatory agents, anti-osteoporosis agents, anti-obesity agents, cardiac glycosides, cholesterol lowering agents, anti-depressants, anti-anxiety agents, anabolic agents, and thyroid mimetics.

19. (new) A method for treating prostate cancer which comprises administering to a mammalian species in need of treatment an effective amount of a compound as defined in claim 15 or a pharmaceutically acceptable salt thereof.

REMARKS

Claims 1, 4-8, and 10-19 are pending in the application. Claims 1, 4, 5, 7, 8 and 10 are amended in this response; claims 11-19 are new. In the Official Action mailed January 24, 2008, the Examiner rejected claims 1, 4 and 5 as being anticipated by Sun et al., US 2004/0019063 per 35 U.S.C. §102(e), and rejected claims 1, 4, 5 and 10 as being obvious in view of Sun et al. The Examiner also stated that claims 6-8 were not allowable because they depended from a rejected base claim but would be allowable if rewritten in independent form.

Before explaining the present amendments and responding to the anticipation rejection, Applicants note that at the time the presently claimed invention was invented, the Applicants were under a duty to assign to the same assignee of record in the '063 publication, viz. Bristol-Myers Squibb Company. Consequently, under 35 U.S.C. §103(c), the '063 publication cannot be cited against the present application as the basis for a §103 obviousness rejection.

Claim 1

Claim 1 has been amended to delete the recitation that formula I includes stereoisomers, inasmuch as, to the extent that the stereochemistry of the molecule is not depicted in formula I, formula I by definition encompasses all stereoisomers. See e.g. paragraph 101 of the published specification. Additional amendments have also been made in claim 1 for the sake of clarity, e.g. the definition of G has been amended to more clearly recite that G is selected from the group consisting of the four structures shown, and the definition of substituents A-F has been amended to more clearly recite that each of A-F is independently selected from N and CR₁. Provisos (b) and (c) have been amended to more clearly recite what is excluded from the claim. Also, in the structure for G shown in proviso (c), the substituents on the naphthalene moiety have been renamed AA and BB, so as to avoid confusion with the substituents A and B recited earlier in the claim. Finally, in claim 1, the definition of R₁ has been amended to exclude H. It is respectfully submitted that none of these amendments introduce new matter.

In the Official Action, the Examiner asserted that formula Ih in the '063 publication shows a genus of compounds that include some of the presently claimed compounds. Applicants respectfully submit that the Examiner is mistaken in this conclusion, since proviso (b) of claim 1, both as originally filed and in its present form, excludes from claim 1 the prolyl methyl esters of formula Ih of the '063 publication, as well as compounds of formula IVa of the '063 publication.

Furthermore, it is respectfully submitted that in view of the deletion of H from the definition of R₁ in claim 1 (as now amended), compounds such as compounds of formula XIX or the compound shown in Example 54B of the '063 publication are no longer within the scope of present claim 1. It is thus submitted that there are no compounds disclosed in the '063 publication that fall within the scope of claim 1, and therefore claim 1 is novel over the '063 publication.

Since, as noted above, the '063 publication is not available as prior art for purposes of an obviousness rejection against the present application, Applicants believe there is no longer a basis for rejection of claim 1, and allowance of this claim is respectfully requested.

Claim 4

Claim 4 depends from claim 1. In accordance with the amendments in claim 1, the definition of R₁ in claim 4 has been amended so that H is no longer recited. This claim has also been amended to clarify that pharmaceutically acceptable salts are within the scope of the claim.

Claim 5

Claim 5 has been amended to clarify that the pharmaceutical composition includes a compound according to claim 1 or a pharmaceutically acceptable salt thereof, not "the" compound of claim 1. A typographical error in the word "therefor" has also been corrected.

Claims 7, 8 and 10

Claims 7, 8 and 10 have been amended to clarify that they include pharmaceutically acceptable salts of the recited compounds.

New claims 11-14

New claims 11-14 correspond to claims 5-8, but refer to the compounds or salts recited in claim 10 rather than the compounds or salts recited in claim 1.

New claims 15-19

New claim 15 corresponds to claim 1 as filed in on August 29, 2007, but the definition of R₃ has been limited to alkyl, substituted alkyl and CH₂OR₄. It is respectfully submitted that this

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limitation, in combination with proviso (b), excludes from claim 15 compounds of formulae Ih, IVa, XIX or Example 54B of the '063 publication, and therefore this claim is novel over that publication. Since, as explained above, the '063 publication cannot be used against the present application as a §103 reference, it is respectfully submitted that new claim 15 is allowable. New claims 16-19 correspond to claims 6-9 but refer to the compounds or salts recited in claim 15 rather than the compounds or salts recited in claim 1.

In view of the foregoing amendments and remarks, it is submitted that the application is in condition for allowance. Allowance thereof is respectfully requested.

Sincerely yours,

A handwritten signature in black ink, appearing to be 'D. J. Feigelson', with a long horizontal line extending to the right.

Daniel J. Feigelson
Applicants' representative

Electronic Acknowledgement Receipt

EFS ID:	3173053
Application Number:	10712456
International Application Number:	
Confirmation Number:	9300
Title of Invention:	Open chain prolyl urea-related modulators of androgen receptor function
First Named Inventor/Applicant Name:	Lawrence G. Hamann
Customer Number:	23405
Filer:	Daniel J. Feigelson
Filer Authorized By:	
Attorney Docket Number:	1073.134A
Receipt Date:	18-APR-2008
Filing Date:	13-NOV-2003
Time Stamp:	11:29:59
Application Type:	Utility under 35 USC 111(a)

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes) /Message Digest	Multi Part /.zip	Pages (if appl.)
1	Amendment - After Non-Final Rejection	1073134A_response_April_2008.pdf	895356 da70ad1b610452bd2a9f710a8c56e6701dbe6524	no	12

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